

REMARKS

Upon entry of the above amendment, claims 1-23 will be all the claims pending in the application. The claims have been amended and claim 23 has been added based on the disclosure at, e.g., pages 4, 12-15 and 18 in the specification. The claims have also been amended to make grammatical changes. Claim 18 has been amended to resolve an objection raised by the Examiner without narrowing the scope of the invention claimed therein.

Entry of the above amendment is respectfully requested.

Objection to Claim 18

On page 2 of the Office Action, in paragraph 1, the Examiner has objected to claim 18 because the term "transfer material" is not commonly used to describe a multilayer photolithography structure which comprises a support, a resin layer, an interlayer and another resin layer.

While Applicants consider that the language of original claim 18 was acceptable, in order to expedite allowance Applicants have amended claim 18 to obviate this issue. Accordingly, withdrawal of this objection is respectfully requested.

Art Rejections

On page 2 of the Office Action, in paragraph 3, claims 1-5 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Parusel et al. (US 5,625,021). Further, on page 3 of the Office Action, in paragraph 5, claims 6-14 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Parusel. Also, on page 5 of the Office Action, in paragraph 6, claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parusel as applied to claims 1-5 and 20 above, and further in view of Hashimoto et al. (US 5,955,198). In addition, on page 6 of the Office Action, in paragraph 7, claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parusel in view of Nakamura et al. (US 6,582,862) and Jain et al. (US 4,863,827). Moreover, on page 8 of the Office Action, in paragraph 8, claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parusel in view of Hashimoto, as applied to claims 15-17 above, and further in view of Jones (US 5,529,524). Additionally, on page 8 of the Office Action, in paragraph 10, claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parusel as applied to claims 1-5, 20 above, and further in view of Nakamura and Jones.

In response to these rejections, Applicants submit initially that the present invention is directed to a resin composition for a spacer which comprises: at least one resin selected from (1) a resin containing at least an allyl group, (2) a resin containing at least an allyl group and a hydroxyl group, and (3) a resin mixture containing an allyl-containing resin and a hydroxyl-containing resin; a polymerizable monomer; and a polymerization initiator. The resin composition of the present invention is, moreover, a photo-polymerizable resin composition.

Applicants note that Parusel et al. discloses a method for the production of poly (meth) acrylate particles and the use of such particles for a spacer. However, Applicants submit that Parusel et al. simply discloses allyl(meth) acrylate as one example of the applicable cross-linking agents to form poly(meth) acrylate particles (see Parusel et al. at column 3, lines 7-23), and furthermore, the disclosed allyl(meth) acrylate is a monomer, not a polymer, i.e., a resin. Thus,

Applicants submit that Parusel et al. does not teach all the elements required by the present invention. Therefore, the present invention is not anticipated by or obvious over Parusel et al.

Regarding Hashimoto et al., Applicants submit that this reference simply discloses a composite resin for dot spacers, which comprises a modified epoxy compound, and inorganic fillers (see Hashimoto et al., at column 4, lines 50-54).

With respect to Nakamura et al., Applicants submit that this reference simply discloses a high photo-sensitive curable resin. Applicants submit that Nakamura et al., contrary to the Examiner's assertion, teaches away from the use of "2-hydroxyl ethylmethacrylate" (see Nakamura et al., at column 2, line 59 to column 3 line 9).

In regard to Jain et al, Applicants submit that this reference simply discloses a photoresist material (see Jain et al. Abstract).

As to Jones, Applicants submit that this reference merely discloses pixel pattern spacers (see Jones, at column 15, lines 26-34).

However, Applicants submit that none of the cited references teach or suggest the present invention, namely the resin composition, which is photopolymerizable resin composition, comprising at least one resin selected from (1)-(3), a polymerizable monomer and a polymerization initiator.

Applicants submit that the present invention improves the removability of residue after developing by comprising the particular resin as mentioned above (see the present specification, Examples and Table 1).

Applicants submit that the spacer material of Parusel et al. is not photosensitive, and is not subjected to developing in a process of forming a spacer. Hence, Parusel et al. *per se* does not provide any motivation to one of ordinary skill in the art to achieve the present invention. Even in view of other cited references, Applicants submit that Parusel et al. does not provide any motivation to achieve the present invention, as there is no motivation to combine the teachings of the cited references with Parusel et al. to achieve the present invention.

Accordingly, Applicants submit that the present invention is patentable over the cited references.

Thus, as has been discussed above, the present invention is not anticipated by Paruse et al., and is not obvious over Paruse et al. alone or in view of Hashimoto et al., Nakamura et al., Jain et al., Jones, individually or in any combination. Therefore, the rejection under §102(b) and the rejections under §103(a) should be withdrawn, and withdrawal of all the rejections is respectfully requested.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 10/695,906

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.


Respectfully submitted,

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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CUSTOMER NUMBER


Bruce E. Kramer
Registration No. 33,725

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